JPRS 81047

15 June 1982

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 148

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81047

15 June 1982

WORLDWIDE REPORT

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 148

CONTENTS

ASIA

AUSTRALIA

Queensland Wants State Control of Nuclear Industry
(Peter Morley; THE COURIER-MAIL, 6 Apr 82)............... 1

Anti-Nuclear Forces Hold Large Rally in Brisbane
(Karl Condon; THE COURIER-MAIL, 8 Apr 82)............... 2

French Seize 'Peace Vessel'in Tahiti; Protests Mount
(Nicholas Rothwell; THE WEEKEND AUSTRALIAN, 10-11 Apr 82).... 4

Northern Territory Officials Urge Uranium Expansion
(Nicholas Rothwell; THE AUSTRALIAN, 7 Apr 82)............... 5

Tonkin Predicts Uranium Enrichment Plant For SA by 1990
(Ken Merrigan; THE COURIER-MAIL, 15 Apr 82)................ 6

SA Union Break With Uranium Policy Boosts Roxby Chances
(Alex Greig; THE AUSTRALIAN, 19 Apr 82)................... 7

Labor Party Sticking to 'Repudiation' Policy on Uranium
(Paul Kelly; THE SYDNEY MORNING HERALD, 16 Apr 82)......... 9

Briefs

Radioactivity in Milk 10

INDIA

Minister Reports Heavy Water Output Adequate
(THE TIMES OF INDIA, 7 May 82)........................... 11

Briefs

Defense Expert on Nonproliferation Pact 12

THAILAND

Editorial Suggests Using Nuclear Explosion To Build Canal
(Editorial; THE NATION REVIEW, 24 Apr 82)................ 13

Uranium Processing Plant Planned
(Bangkok Voice of Free Asia, 13 May 82).................. 15

EAST EUROPE

INTERNATIONAL AFFAIRS

Necessity For Nuclear Energy Development Assessed
(Jan Kubit Interview, ZYCIE WARSZAWY, 24-25 Apr 82)..... 16

CZECHOSLOVAKIA

Nuclear Development in CSSR Reviewed
(Miroslav Cibula; SVET HOSPODARSTVI, 2 Mar 82)........... 20

LATIN AMERICA

ARGENTINA

Nuclear Budget, Plan Excluded From Economic Restrictions
(Martin F. Yriat; ENERGEIA, Apr 82)..................... 25

NEAR EAST AND NORTH AFRICA

INTERNATIONAL AFFAIRS

Briefs
Kuwait, Tunisia Deal 28

INTER-ARAB AFFAIRS

Nuclear Energy Situation in Arab Nations Reviewed
(AL-DUSTUR, 26 Apr 82).................................. 29

SUB-SAHARAN AFRICA

KENYA

Briefs
Nuclear Energy Turned Down 33

LIBERIA

CLUE Manager Denies Operations About To Be Shut Down
(DAILY OBSERVER, 13 May 82).................................. 34

NIGERIA

Briefs
Paper Accuses West 36

SOUTH AFRICA

Bill Regulating Nuclear Safety, Energy Published
(THE CITIZEN, 27 May 82)................................ 37

Koeberg No Threat, Says De Klerk
(THE CITIZEN, 22 May 82)................................ 38

Briefs
Radiation Alarm System 39

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

Hamburg To Build Nuclear, Coal-Fired Power Plants
(DER SPIEGEL, 3 May 82)................................. 40

TURKEY

'MILLIYET'Columnist Discusses 'Muslim' Atomic Bomb
(Attila Ilhan; MILLIYET, 3 Apr 82)...................... 43

AUSTRALIA

QUEENSLAND WANTS STATE CONTROL OF NUCLEAR INDUSTRY

Brisbane THE COURIER-MAIL in English 6 Apr 82 p 12

[Article by Peter Morley]

[Text] **State Cabinet made it clear yesterday that it would fight to control the regulation, licensing and development of any nuclear industry in Queensland.**

In a blunt warning to the Federal Government, the Premier, Mr Bjelke-Petersen, said: "Canberra should not attempt to establish machinery to stop the state exercising constitutional rights."

Cabinet took this stand when it considered proposed amendments to the Federal Government's Atomic Energy Act.

Ministers adopted an "initial view" which will put the Queensland position at a special meeting of federal and state representatives later this month.

Mr Bjelke-Petersen said the present Act did not provide an appropriate basis for the nuclear industry's development and effective control would require new legislation.

"While recognising Canberra's international responsibilities in this general area, the state must play the major role within its own boundaries," he said.

"Queensland is prepared to implement appropriate state legislation, complemented by Commonwealth legislation where necessary, to ensure Australia's international obligations are fully honored.

"However, any expansion of Commonwealth jurisdiction into state areas of decision-making will not be acceptable to the Queensland Government.

"Decisions on the development or siting of a uranium enrichment facility or nuclear power plants must remain the responsibility of the state."

CSO: 5100/7529

ANTI-NUCLEAR FORCES HOLD LARGE RALLY IN BRISBANE

Brisbane THE COURIER-MAIL in English 8 Apr 82 p 3

[Article by Karl Condon]

[Text] A crowd estimated at up to 5000 marched peacefully through Brisbane's city centre last night, protesting against the nuclear arms race.

The Rally for Peace, was one of the biggest gatherings ever seen in King George Square.

Among the protesting ranks were members of the Communist Party, unionists, Quakers, and Labor federal and state Members of Parliament.

There were children carrying the Children for Peace banner, protesters wearing gas masks and black or silver suits bush bands and even a few dogs.

Apart from escort duty, there were only a handful of police to be seen.

There were no arrests or injuries.

The "peace walk" began from King George Square after an hour-long rally and ended in the Roma Street forum.

Led by 38 cyclists making a world ride for a nuclear-free future, it moved along Adelaide, George, Elizabeth, Creek, Ann and Roma streets.

In the square the rally was addressed by a range of speakers.

There was historian Professor Manning Clark, Federal Deputy Opposition Leader Mr Bowen, former German Maj. Gen. Gert Bastian and actress Ms Rebecca Gilling.

Maj.-Gen. Bastian resigned from the German army two years ago in protest against his government's decision to deploy nuclear Cruise missiles in Germany.

Mr Bowen told the crowd that there were 40,000 nuclear weapons in the world that could destroy millions of people.

He said throughout the world people were holding peace rallies and in the United States President Reagan was becoming worried.

"The most important thing we can do is remove Ronald Reagan and his ilk," Mr Bowen said. "They have no consideration for humanity or people who have to survive the future.

"Half the world has no education yet spending on war is $1 million a minute."

He said that if only a fraction of this spending went to improve people's standards of living, the money that provided one tank would give 2000 classrooms and one rifle would be $800 to help peasants live.

This surely was more important than building weapons to kill and maim.

Mr Bowen said Australia had a government that thought whatever Mr Reagan did was all right. It was servile and supine.

He criticised sending an Australian force to the Sinai, saying it was ridiculous to suggest it was keeping the peace.

"The solution is for Reagan and Brezhnev to meet and remove all nuclear weapons under their control," Mr Bowen said.

"It can be done and it is the only logical solution."

In **Sydney** the Federal Opposition deputy Whip, Senator McIntosh, will fly to Tahiti today "to ensure respect for the rights of the crew of the anti-nuclear yacht, Pacific Peacemaker, by the French authorities."

The crew of the yacht allege it was rammed by the French police boat La Bataille last Friday morning about 1 km off Mururoa Atoll while attempting to deliver a message to the French commander of the island.

The yacht was then towed out to sea for about two hours and it has been making its way to Papeete under half power since then, followed by the La Bataille.

Many sponsors of the boat, including the Australian Council of Trade Unions' president, Mr Cliff Dolan, have registered their protest over the incident to the French Government.

CSO: 5100/7529

FRENCH SEIZE 'PEACE VESSEL' IN TAHITI; PROTESTS MOUNT

Canberra THE WEEKEND AUSTRALIAN in English 10-11 Apr 82 p 1

[Article by Nicholas Rothwell]

[Text] **FRENCH police in Tahiti yesterday impounded the Australian anti-nuclear protest yacht Pacific Peacemaker, seized film of the boat being rammed by French naval vessels and laid civil charges against the crew for illegal entry into French waters off the Mururoa Atoll nuclear test site.**

The Peacemaker, captained by Mr Bill Ethell of Perth, was joined at first light yesterday by West Australian senator Gordon McIntosh, who flew to Tahiti to ensure "proper treatment" by the French authorities of the crew.

The damaged yacht entered the harbor of Papeete, the capital of French Polynesia, at nine in the morning and hove-to off the main customs house, where ship and crew were immediately subjected to a "rigorous but courteous" examination by police and customs officials.

Mr Ethell told *The Australian*, via telephone link to Papeete harbor, that French civilian officials had already admitted the Peacemaker had been rammed by the French military vessel Tapatai off Mururoa last week.

Officials of the French civilian Government which administers the territory have told Mr Ethell the vessel, which is still seaworthy despite being rammed at full tilt, will be detained in Papeete harbor until the case on the breaching of the 12-mile limit has been heard.

Another civil action will be heard by the District Attorney's office to determine responsibility for the damage — estimated at $15,000 in repair costs — sustained by the Peacemaker during the collision.

Protests over the ramming of the vessel have been made by the ACTU, the Australian Council of Churches, the Pacific Council of Churches and the World Council of Churches.

CSO: 5100/7529

NORTHERN TERRITORY OFFICIALS URGE URANIUM EXPANSION

Canberra THE AUSTRALIAN in English 7 Apr 82 p 21

[Article by Nicholas Rothwell]

[Text] AUSTRALIA'S uranium exploration and production must be boosted at once if this country is to take full advantage of a long-term expansion in world demand for the nuclear fuel, a senior Northern Territory Government team said from London last night.

The Territory, which controls the lion's share of Australia's high-grade uranium reserves, has assumed new importance on the international market with the release this week of the Organisation for Economic Co-operation and Development's "Red Book", an authoritative survey of the uranium market.

The survey, released every two years by the OECD's Nuclear Energy Agency, agrees with most market studies of the nuclear industry in predicting slack demand until the end of this decade, but then forecasts a rapid increase in demand.

The Territory's Minister for Mines and Energy, Mr Tuxworth, and the Secretary of the Territory Department of Mines, Mr Mike Purcell, are at the start of a two-week trip through Europe to meet uranium customers, energy utilities and nuclear power station manufacturers.

Mr Tuxworth said the OECD report had confirmed the need for Australia to develop its uranium resources and warned that "substantial new resources" would need to be identified to meet the expected demand.

There has been lengthy controversy over the Territory Government's support for uranium mining and the Federal Government's approval for giant mine projects on Aboriginal land in the uranium-rich Arnhem Land province, where the giant Jabiluka deposit, to be developed by Pancontinental, has just been given the go-ahead.

The special European tour by Mr Tuxworth includes an inspection of potential uranium markets, and high-level talks on the possibilities for development of the Territory's reserves are planned with British and other European officials.

"The chances for Australia to win an increased market share are excellent, but with the projected recovery in demand ahead, we must lay more stress on selling our uranium to the Europeans," Mr Tuxworth warned.

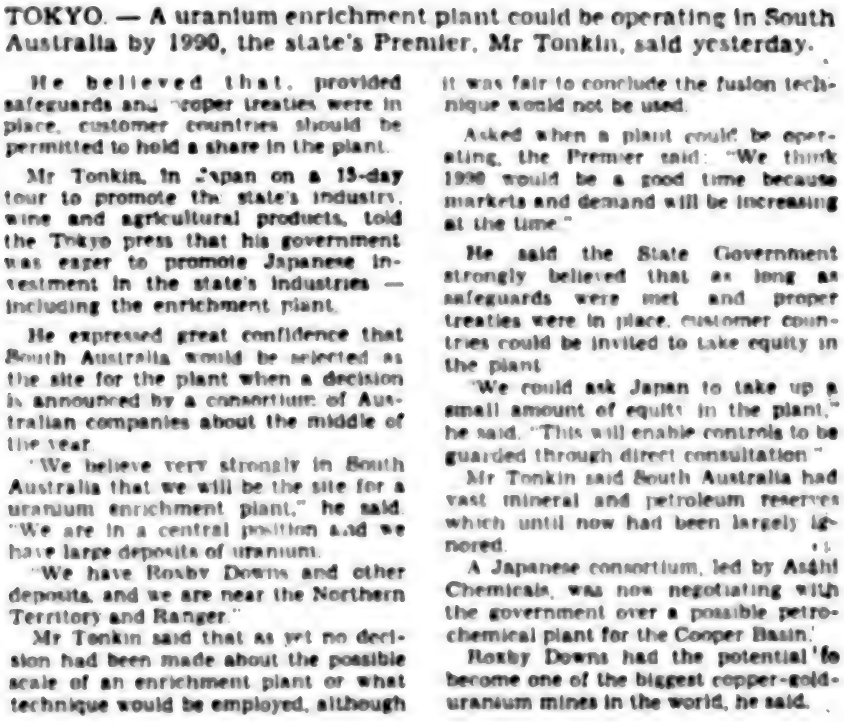
Mr Tuxworth also pointed out that Australia should be actively competing with South Africa.

CSO: 5100/7529

TONKIN PREDICTS URANIUM ENRICHMENT PLANT FOR SA BY 1990

Brisbane THE COURIER-MAIL in English 15 Apr 82 p 26

[Article by Ken Merrigan]



[Text] **TOKYO. — A uranium enrichment plant could be operating in South Australia by 1990, the state's Premier, Mr Tonkin, said yesterday.**

He believed that, provided safeguards and proper treaties were in place, customer countries should be permitted to hold a share in the plant.

Mr Tonkin, in Japan on a 15-day tour to promote the state's industry, wine and agricultural products, told the Tokyo press that his government was eager to promote Japanese investment in the state's industries — including the enrichment plant.

He expressed great confidence that South Australia would be selected as the site for the plant when a decision is announced by a consortium of Australian companies about the middle of the year.

"We believe very strongly in South Australia that we will be the site for a uranium enrichment plant," he said. "We are in a central position and we have large deposits of uranium.

"We have Roxby Downs and other deposits, and we are near the Northern Territory and Ranger."

Mr Tonkin said that as yet no decision had been made about the possible scale of an enrichment plant or what technique would be employed, although it was fair to conclude the fusion technique would not be used.

Asked when a plant could be operating, the Premier said: "We think 1990 would be a good time because markets and demand will be increasing at the time."

He said the State Government strongly believed that as long as safeguards were met and proper treaties were in place, customer countries could be invited to take equity in the plant.

"We could ask Japan to take up a small amount of equity in the plant," he said. "This will enable controls to be guarded through direct consultation."

Mr Tonkin said South Australia had vast mineral and petroleum reserves which until now had been largely ignored.

A Japanese consortium, led by Asahi Chemicals, was now negotiating with the government over a possible petrochemical plant for the Cooper Basin.

Roxby Downs had the potential to become one of the biggest copper-gold-uranium mines in the world, he said.

CSO: 5100/7529

AUSTRALIA

SA UNION BREAK WITH URANIUM POLICY BOOSTS ROXBY CHANCES

Canberra THE AUSTRALIAN in English 19 Apr 82 p 3

[Article by Alex Greig]

[Text] A shock policy shift on nuclear development by the Australian Workers Union in South Australia has strongly bolstered the chances of large-scale uranium mining at Roxby Downs.

The shift, decided earlier this month by the AWU executive and kept under wraps until it was leaked at the weekend, is the first major crack in the united stance by the State ALP and affiliated unions opposing uranium mining.

The policy reversal brings the State AWU branch in line with federal AWU policy and provides union support for workers employed on the giant mineral resource find at Roxby Downs, in South Australia's far north.

The resource contains one of Australia's largest deposits of copper, gold and uranium. It is being developed as a joint venture between the Western Mining Corporation and BP.

The State ALP Opposition has vowed to oppose uranium mining at the site and has indicated it will oppose the Indenture Bill covering development of the site by the joint venture partners if uranium mining is sanctioned in the agreement.

For their part, the partners and the South Australian Tonkin Government have insisted that the project's viability depends on uranium mining at the site.

South Australia's Opposition Leader, Mr John Bannon, said at the weekend he was disappointed by the AWU move, claiming it had "complicated an already murky issue."

"The only complication I see is that the ALP will seem to have been compromised by this act of the AWU in the public's mind," Mr Bannon said.

But the acting South Australian president of the AWU, Mr John Dunnery, defended his union's move.

"We can't turn out backs on members just because of the place where they happen to be working," he said.

"Our people are already at Roxby Downs working under the Federal Services Prospecting Award and we have to recognise that fact.

"We have to accept there are workers already mining and processing uranium in the Northern Territory under the Miscellaneous Workers Union.

"Mr Dolan of the ACTU has been up to tell them they shouldn't be working, but they are still there.

"It's a problem, but where is Mr Dolan going to find alternative jobs for our members that pay $600 a week?"

"We might ask where Mr Dolan is going to find them other jobs at all.

"While we have members who want to work at Roxby Downs, we'll be looking after their interests," Mr Dunnery said.

Meanwhile, Acting Premier and Minister for Mines and Energy, Mr Goldsworthy, welcomed the AWU switch.

"I am pleased the branch has fallen into line with federal policy. It seems this is another indication in the union movement of firmness of support for uranium development," he said.

CSO: 5100/7530

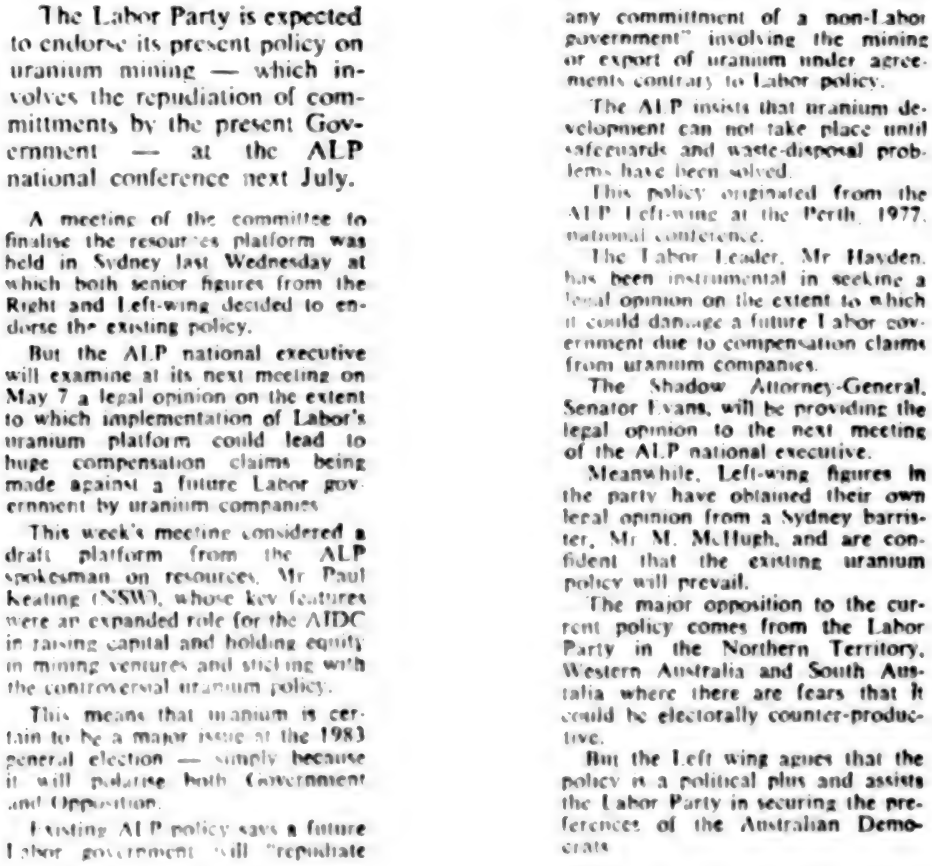
AUSTRALIA

LABOR PARTY STICKING TO 'REPUDIATION' POLICY ON URANIUM

Sydney THE SYDNEY MORNING HERALD in English 16 Apr 82 p 3

[Article by Paul Kelly, political correspondent]

[Text]



The Labor Party is expected to endorse its present policy on uranium mining — which involves the repudiation of committments by the present Government — at the ALP national conference next July.

A meeting of the committee to finalise the resources platform was held in Sydney last Wednesday at which both senior figures from the Right and Left-wing decided to endorse the existing policy.

But the ALP national executive will examine at its next meeting on May 7 a legal opinion on the extent to which implementation of Labor's uranium platform could lead to huge compensation claims being made against a future Labor government by uranium companies.

This week's meeting considered a draft platform from the ALP spokesman on resources, Mr Paul Keating (NSW), whose key features were an expanded role for the AIDC in raising capital and holding equity in mining ventures and sticking with the controversial uranium policy.

This means that uranium is certain to be a major issue at the 1983 general election — simply because it will polarise both Government and Opposition.

Existing ALP policy says a future Labor government will "repudiate any committment of a non-Labor government" involving the mining or export of uranium under agreements contrary to Labor policy.

The ALP insists that uranium development can not take place until safeguards and waste-disposal problems have been solved.

This policy originated from the ALP Left-wing at the Perth, 1977, national conference.

The Labor Leader, Mr Hayden, has been instrumental in seeking a legal opinion on the extent to which it could damage a future Labor government due to compensation claims from uranium companies.

The Shadow Attorney-General, Senator Evans, will be providing the legal opinion to the next meeting of the ALP national executive.

Meanwhile, Left-wing figures in the party have obtained their own legal opinion from a Sydney barrister, Mr M. McHugh, and are confident that the existing uranium policy will prevail.

The major opposition to the current policy comes from the Labor Party in the Northern Territory, Western Australia and South Australia where there are fears that it could be electorally counter-productive.

But the Left wing agues that the policy is a political plus and assists the Labor Party in securing the preferences of the Australian Democrats.

CSO: 5100/7530

BRIEFS

RADIOACTIVITY IN MILK--Milk supplies are still showing signs of radioactive contamination even though France last exploded an atomic bomb in the atmosphere more than five years ago. Traces of contamination were revealed in milk from Capel, in the south-west of Western Australia, after tests by the Australian Radiation Laboratory in Melbourne. The tests were conducted to find whether any member of the uranium or thorium series of radioactive substances were present in the Capel milk, following anxiety about the use of monazite tailings as land fill in the area. Although no traces of these substances were detected, caesium 137--a fall-out product resulting from the French atomic tests on Mururoa Atoll during the mid-1960s and 1970s--was found. [Text] [Canberra THE WEEKEND AUSTRALIAN in English 10-11 Apr 82 p 3]

CSO: 5100/7530

MINISTER REPORTS HEAVY WATER OUTPUT ADEQUATE

Bombay THE TIMES OF INDIA in English 7 May 82 p 5

[Excerpt]

NEW DELHI, May 6 (UNI).

THE opposition charged the minister of state for science and technology, Mr. C. P. N. Singh, with "hiding something" when he said whether heavy water had to be imported for the reactor, R-5, could be decided only at the time of its completion in 1983-84.

Mr. Singh said he was not hiding anything. Production of heavy water was being taken up in a phased manner. Heavy water requirement was at present being looked after by the Baroda and Tuticorin plants. Kota and Talcher plants would also be commissioned to meet the gap in supply.

The heavy water requirement for the initial charge of R-5 would be 90 tonnes and operational loss was estimated at three tonnes.

The R-5 was an experimental plant with a 100 Mw capacity. There was no shortage of heavy water for it.

Mr. Jaswant Singh, Mr. A. Kulkarni, Mr Shahabuddin, Mr H. S. Bhabhra, Mr V. Gopalasamy and Mr. P. Ramamurti, persistently asked about indigenous production of heavy water and how the government would meet the demand.

Mr. Singh said the question did not relate to heavy water production for which he did not have figures immediately.

The chairman, Mr. M. Hidayatullah, said the questioner should have sought specific details about heavy water.

The members' worry was since the U.S. and Canada had refused to supply heavy water, from where could the government get it.

In his main answer to Mr. Jaswant Singh, Mr. C. P. N. Singh said the construction of R-5 was likely to be completed during 1983-84.

Mr. Singh told Mr. Jaswant Singh that plutonium 239 was a byproduct which "we are not manufacturing."

He said at present there was no need to import heavy water. As and when necessary, the government would take steps for imports.

The occurrence of a minor mishap in the zirconium sponge plant of the Hyderabad nuclear fuel complex was confirmed by the minister of state for science and technology, Mr. C. P. N. Singh, in a written reply.

There was no injury to anybody or damage to any equipment, he said.

In another answer, the minister denied that "the recognised union" of employees of Rajasthan atomic power plant had made any complaint of high radiation exposure in the plant.

CSO: 5100/7094

INDIA

BRIEFS

DEFENSE EXPERT ON NONPROLIFERATION PACT--NEW DELHI, May 8 (UNI)--The 80 developing countries, which are signatories to the Non-Proliferation Treaty (NPT), should withdraw from it unless the nuclear powers reduce their nuclear arsenal by half within one year, says an Indian defence expert. The threat to repudiate the treaty "would powerfully strengthen" the popular peace movements in the industrialised world, according to Mr. K. Subrahmanayam, director of the Institute for Defence Studies and Analyses. In a study released recently, Mr. Subrahmanayam says that the developing countries should put forth this demand during the U.N. special session on disarmament to be held in June. Mr. Subrahmanayam has also suggested that developing countries should move the world court to seek a ruling whether nuclear arms are legitimate weapons of defence under the U.N. charter. According to him, developing countries should extend "financial support to the anti-nuclear war movements in the developed nations and keep the anti-nuclear debate alive at a popular level in these societies." Describing the present nuclear world order "Pax Atomica of the nuclear weapon powers" on the developing world, Mr. Subrahmanayam has questioned the validity of the argument that NPT and nuclear weapon-free zones are arms control measures. [Bombay THE TIMES OF INDIA in English 9 May 82 p 5]

CSO: 5100/7095

EDITORIAL SUGGESTS USING NUCLEAR EXPLOSION TO BUILD CANAL

Bangkok THE NATION REVIEW in English 24 Apr 82 p 4

[Editorial: "Kra Canal: Why Not Revive the Nuclear Option?"]

[Text] IT IS A PITY THAT historians write only about what actually happened or what they thought happened. They never write about what did not happen nor what would never have happened. In other words, what we mean is that historians do not write about non-stories. We would like to evaluate whether the digging of the Kra Canal or the building of Bangkok's second airport at Nong Ngu-hao is the biggest recurring non-story of the past few decades. We would vote for the digging of the Kra Canal since it ante-dates World War II. But those who read Bangkok newspapers in 1971 and did not follow events in Thailand after that would believe that the Nong Ngu-hao airport has already been built by Northrup. But the cobras got a lease of life

We are not at all surprised that the Kra Canal project has been revived again — we have lost count how many times it has been revived. We will not be surprised at all if the Nong Ngu-hao airport project is revived again too although we think that project has been milked dry. But the Kra Canal project had never reached that stage. Actually there is some post-World War II understanding or treaty between Britain and Thailand that the Kra Canal should not be dug because at that time Britain wanted to maintain the importance of her colony, Singapore. But that is history.

But those who have followed the evolution of the Kra Canal project as we have, should definitely allow that it is the most colourful project that has ever been thought of in the world — let alone Asia. In the early 1960s Edward Teller, the top American expert in the peaceful uses of atomic energy, said that the Kra Canal could be dug by the use of well-controlled atomic explosions and that it would cost far less than other ways of digging the canal. As far as development projects go, we have never heard of anything in the world that could match this surrealism.

There must be files, at least a mile high, in the Communications Ministry about the Kra Canal and nobody can presume he has read all the studies that have been made. But we do know that apart from 'digging' the canal there were to other proposals. These were due to the fact that super-tankers were taking oil from the Persian Gulf to Japan and the short-cut through the Kra Peninsula would cost Japan less and profit Thailand very much

Of course our brilliant planners of that time decided, despite Edward Teller, that they could not dig a canal (it required four locks similar to the Panama Canal) big enough for super-tankers to pass through. We have never been short of genius and so it was proposed that a gigantic oil pipeline should be built across Kra from the Andaman Sea to the Gulf of Siam so that one super-tanker at Andaman Sea side will feed the pipeline while another in the Gulf of

Siam would receive the oil and then speed it on its way to Japan. For reasons that were never fully explained this idea was consigned to limbo.

Then came the next brilliant idea and that was to build a super-highway across the Kra Isthmus and thousands and thousands of oil-tanker trucks would move petroleum from the Andaman Sea to the Gulf of Siam or from one super-tanker to another Somehow this idea too did not catch on. And now we are back to digging a canal. We do not know what has happened to Edward Teller, but if we can revive the idea of the peaceful use of atomic energy to dig the canal we would not only capture the imagination of Thais but of the entire world.

CSO: 5100/5660

URANIUM PROCESSING PLANT PLANNED

BK140445 Bangkok Voice of Free Asia in English 1100 GMT 13 May 82

[Text] It has been revealed that a uranium processing plant will be set up for the first time in Thailand to supply a radioactive compound for use as fuel in nuclear power plants. The secretary general of the Office of the Atomic Energy for Peace said that the uranium compound to be processed from monazite ores will be in the form of yellow cake. The yellow cake could be used as a fuel in nuclear power plants after it had undergone a specific simple process. The chief of the office has further revealed that the pilot plant will also yield two byproducts, rare earth oxide and trisodium phosphate, which could be used as material in various industries.

Dr Kannika Sirisena, who supervises the pilot project, disclosed that the plant would also yield a thorium compound, another radioactive element, which could theoretically fuel the production of electricity. The plant would be capable of processing about 300 tons of monazite into 42 tons of yellow cake annually. About 300 tons of trisodium phosphate and 150 tons [figures as heard] of rare earth oxide would also be yearly outputs of the plant.

Thailand imports a large amount of the two kinds of minerals for various branches of industry annually. The secretary general of the Office of the Atomic Energy for Peace disclosed that the Department of Mineral Resources had informed the office that it could supply the plant with 300 tons of monazite a year for 15 years. It has also been revealed that the project to build the uranium processing plant was contained in the 5th national economic and social development plan.

CSO: 5100/5661

NECESSITY FOR NUCLEAR ENERGY DEVELOPMENT ASSESSED

Warsaw ZYCIE WARSZAWY in Polish 24-25 Apr 82 pp 1, 2

[Interview with Mgr Eng Jan Kubit, plenipotentiary for nuclear power affairs of the Ministry of Mining and Power Industry; date and place not specified]

[Question] Nuclear powerplants already have been built by the Bulgarians, Czechoslovaks and East Germans. In these countries, power units with a total power output of 4,500 MW have been placed into operation.

Bulgaria has four 440-MW power units, Czechoslovakia has two 440-MW power units and the GDR has four 440-MW power units. The Hungarians are completing the construction of their first 440-MW power unit and the Czechoslovaks a similar third unit. What is more, 21 more power units, including 1,000-megawatters, with a combined power output of 12,000 MW are in the design and construction phase in these countries. Why are we so late in constructing a nuclear powerplant?

[Answer] If the concern here is about an executive decision, then the construction of Poland's first nuclear powerplant is at least 10 years behind schedule. The resolution to build the Zarnowiec power complex, consisting of a hydropower plant, a 680-MW pumped-storage powerplant and a 1,500-2,000 MW nuclear powerplant, was passed in 1971. The nuclear powerplant was to deliver 800 MW to the hydropower plant, which was needed to pump water from Lake Zarnowiec to the upper reservoir at night. The first 170-MW power unit of the hydropower plant is already operating, but the decision to begin construction of thenuclear powerplant remained on paper till January 1982.

[Question] Why was that?

[Answer] There were several reasons. In the 1970's the prevailing viewpoint was that we had unlimited reserves of coal. The saying that "Poland is sitting on coal" was in vogue. However, brutal reality demonstrated that we would be unable to produce on the order of 200 million tons of hard coal annually. Investments in mining are exceedingly labor-intensive. In addition, hard coal is not only for burning; it also should be used in chemical processing, including coking and gasification processes.

However, the opinion regarding unlimited reserves of hard coal hampered the development of the power industry based on brown coal and nuclear energy.

There was another reason. Entering the nuclear power field is new to our technology. It is a matter of mastering the production of special materials and unusually complex equipment, in addition to mastering and becoming familiar with reactor technology.

Of course someone else could have built a nuclear powerplant for us and supplied a complete set of equipment. But this would be primitive thinking. The question must always be asked; how could one pay for this? Today we can answer this question. In 1979 an agreement on cooperation and specialization in the production of nuclear energy equipment was signed by the CEMA countries. Poland participates in this international division of labor. We have become a provider of high-percision equipment such as heat exchangers, pressure stabilizers, emergency electric power supply units, transport equipment, nuclear electronic systems and the like.

The third reason for the delay is the relatively low level of technical knwoledge of the public and the decisionmakers concerning atomic energy, and their fears about the effectiveness of radiation safeguards in nuclear powerplants.

[Question] Some opponents of nuclear power have become proponents.

[Answer] The necessity to build a nuclear powerplant will be decided by irrefutable arguments. The energy-fuel balance is of fundamental importance. There is a shortage of conventional fuels. Until 1990, the basic growth in electric power will come from the Belchatow powerplant, where 12 360-MW turbine units will be installed. This will be a powerful injection of 4,300 MW. But further expansion of the electric power industry based on brown coal will become complicated. Also, the balance of water resources is limited. For example, the Vistula program can assure only 2,000 MW--and not very soon--with continuing high-cost investments. Thus, there is no othe solution except to develop the nuclear power industry.

[Question] But will Poland's socioeconomic situation permit such an investment?

[Answer] Should we stagnate, limit Poland's development? Without the power industry as the basic foundation, there is nothing to say. Therefore, the question is rhetorical. In addition, this will not be a reckless investment. It will be done in a rational manner.

[Question] What will the Zarnowiec nuclear powerplant cost?

[Answer] The first stage should cost 44 billion zlotys (1980 zlotys) and will consist of two power units of 440 MW each with a reactor and of 465 MW with a turbine set (efficient Polish turbines built under a Swiss-Bovern license will be installed); the complete project consisting of four 440-MW power units will cost 70 billion zlotys. Is this a lot? Yes, it is. But if the annual investment costs in previous years amounted to 600 billion zlotys and this year will be 430 billion zlotys, the percentage will be small as long as outlays for the nuclear powerplant are distributed over many years. For example, this year's outlays will be barely 1 billion zlotys, next year it will be 2 billion zlotys and so forth. In the current 5-year period 12 billion zlotys will be spent. The powerplant's first power unit will become operational only in the 1988-1989 period.

Over 50 percent of the equipment for the first stage of the powerplant will be provided domestically. But our industry will also earn money on the remaining equipment, which will be imported because the export value of equipment produced for the nuclear powerplants will exceed the value of imports for the Zarnowiec plant.

The technology and design of the basic equipment were developed in the Soviet Union. A Soviet design bureau is executing the working design of the Zarnowiec nuclear powerplant. This country is also assuming responsibility for supplies, which till now were purchased in the West. At the same time the share of imports from the capitalist countries will be practically negligible. The Soviet Union will supply the nuclear fuel.

[Question] Are we prepared to undertake such an investment?

[Answer] Seven thousand Polish specialists are working on the construction of nuclear powerplants in the CEMA countries. This is a lot of potential. One should ask if the building of a nuclear powerplant requires something specific, exceptional. Of course, it does not. However, it requires the systematic, conscientious execution of work in accordance with the documents.

[Question] Will the nuclear powerplant pose a danger to nearby residents?

[Answer] First I will tell you why a nuclear powerplnat is not harmful. Above all, it does not occupy terrain like a thermal electric powerplant, with heaps of furnace fuel and ashes. It also does not appropriate farmlands like powerplants fueled with brown coal. Finally, it does not pollute the air with sulfur oxides, carbon monixide and radioactive substances contained in carbon.

The public continues to bear a certain scepticism and mistrust regarding nuclear powerplants caused by the fear of radiation. But with strict adherence to radiation safety principles, a nuclear powerplant is no more dangerous than any industrial plant. Exceedingly strict disciplines are obligatory here, and devices constantly monitoring the level of radiation are located in the area of the powerplant itself and in the zone of protection. The smallest deviation from the standards will shut down the reactor immediately. About 260 reactors are operating in the world. Accidents have happened at very few powerplants. None of these accidents imperiled human life or health.

The safe WWER 440-type reactors (pressurized water reactors), which have been tested in many countries, will be installed at Zarnowiec. Their performance is exceptional and to date failure-free. They are even more expensive than others of the most modern design. Many of our scientists questioned the selection of these reactors. But those reactors were selected because they were verified as guaranteeing safety of operation. The cost of safety in the reactor portion approaches 30 percent. But such costs must be borne since safety must have priority over economics in a nuclear powerplant.

[Question] What will happen after Zarnowiec?

[Answer] After 1990, practically the entire increase in electric power should come from nuclear powerplants. In accordance with capability and not need, in the year 2000 the installed power in nuclear powerplants will amount to an estimated 15,000 MW.

Subsequent powerplants will be new generation powerplants with 1,000-MW reactors. The 4,000-MW Kujawy power plant is supposed to follow the Zarnowiec powerplants. From five to six such powerplants must be built by the year 2000.

[Question] I agree with your arguments regarding the need to build nuclear powerplants, but I doubt if we can do this in a period of crisis.

11899
CSO: 5100/3018

NUCLEAR DEVELOPMENT IN CSSR REVIEWED

Prague SVET HOSPODARSTVI in Czech 2 Mar 82 pp 1-2

[Article by Eng Miroslav Cibula, CSc, State Planning Commission: "Development of Nuclear Energy in the CSSR"]

> [Text] According to current development concepts and consistent with agreements with the USSR and other CEMA member states on cooperation and collaboration in the production of nuclear power technology, 12 power units are to be constructed in the CSSR with light-water reactors of the Soviet VVER 440 type. There will be four units each in three locations: Jaslovske Bohunice, Dukovany and Mochovce. The first two of these units were put into operation between 1978 and 1980 in the V 1 nuclear power station, Jaslovske Bohunice. By 1986 six more units are to be in operation and construction of the remaining four units is to be completed in the years 1987-89. Other Czechoslovak nuclear power stations will be built with the more efficient and economical VVER 1000 reactors.

The results of 3 years' operation of nuclear power station V 1 in Jaslovske Bohunice (2 x 440 mw) confirm the high reliability, safety and efficiency of hydraulic nuclear reactors of Soviet design. The first unit of this station attained full performance in a reduced period and as early as the winter of 1978-79 its reliable operation helped resolve the disastrous situation in supplying coal to traditional power stations at that time. In 1979, during a test run this unit produced 2.1 billion kwh and attained an annual utilization of planned capacity of 5045 hours. In 1980 the V 1 nuclear station produced 4.5 killion kwh and in 1981 5.2 billion kwh. The coefficient of utilization of the operational equipment of this power station was 14.5 percent higher in 1981 than in the largest Czechoslovak power stations with coal units of 200 mw. In addition, nuclear station V 1 not only underwent a scheduled exchange of fuel elements but overall time loss in the summer months was extended for the time necessary to make the first periodic preventive checkup of all the equipment of unit No 1.

Czechoslovak nuclear power, even though in the initial stages of development, plays a considerable part in meeting the domestic consumption of primary energy sources. In the last five-year plan (1976-1980) the use of nuclear fuel covered 16 percent of the increased consumption of primary energy sources and 60 percent of the increased consumption of electricity. Even though such a large proportion of nuclear power was achieved with a distinct reduction in the growth of consumption of domestic and imported fossil fuels, it must be realized that it was accomplished with only two nuclear energy units with VVER 440 reactors operating only in the last 2 years of the Sixth Five-Year Plan.

[There is a break in the text at this point. The next line begins in lower case with the antecedent missing. Translator's note]

...was to provide not only the entire increase of Czechoslovak consumption of electricity but also make it possible to gradually reduce the production of electricity based on high quality imported fuels and kinds of domestic coals that are in short supply. It is expected that the production of electricity in power stations using fossil fuels will reach its peak level as early as this year and by 1985 it will be reduced by about 8.5 percent. In 1985 Czechoslovak nuclear power stations should be producing about 15 billion kwh. This represents approximately the same amount of electricity as was produced altogether by all Czechoslovak electric generating plants in 1955. The fuel equivalent of this production represents 16 million tons of brown coal.

According to prognostic studies, by the year 1990 the proportion of nuclear fuel in Czechoslovak consumption of primary fuel sources could increase to 16 percent and nuclear power plants should be providing about one-third of the electricity consumption. Somewhere in the mid-1990's, the production of electricity in nuclear generating plants should be higher than in coal-fired facilities. The construction of the generating capacity necessary for this has already been assured to a considerable extent.

In the Seventh Five-Year Plan, work on the first stage of construction of nuclear station Temelin in southern Bohemia will proceed on the basis of an agreement between the governments of the CSSR and the USSR. This power station, which is to have a total capacity of 4,000 mw, will contain units with VVER 1000 reactors, the first of which should become operational in 1990. The annual production of this power station will represent over 25 billion kwh which compares to almost one-third of the current annual consumption of electricity in the CSSR. So great a concentration of generating capacity is unique in our electric power industry up to now. Of course it will provide great opportunities for increasing labor productivity among all participants of construction and will save attendant and induced investment. In the USSR, power stations of the same type are built according to a design model with a great amount of building prefabs and mechanized facilities for construction and assembly work.

Further expected rises in the cost of world fuels and energy, deteriorating conditions for extracting domestic brown and black coal and the impossibility of developing other energy resources to the extent necessary for maximum economical development of an alternative energy base has compelled the CSSR to give priority direction to intensive construction of nuclear energy production capacities.

Czechoslovak nuclear power will be very important in solving the problems of supplying heat in the 1990s. The VVER 440 reactor unit is expected to supply only a small amount of heat from unregulated extraction from the condensing turbines. In the case of the VVER 1000 units, however, the installation of thermal extracting turbines is expected. For this reason, the other nuclear generating stations must be constructed at sites that not only meet the needs of the electrification system but also will be able to supply heat to large industrial and urban centers. Several alternative possibilities for constructing nuclear heating plants to provide housing developments and industry with hot water are under investigation. It would appear to be advantageous to place these assets particularly where they could free considerable quantities of currently used liquid fuels whose consumption for thermal purposes is highly inefficient and will be greatly limited in the future.

In 1990, 94 percent of nuclear power production could be used for the generation of electricity and 6 percent for heat production. After 1990 it should be feasible to attain a higher proportion of heat production, not only from thermal operation of the units with VVER 1000 reactors and construction of nuclear heating plants, but also by utilizing some of the wasted heat which can be put to good use especially in agriculture and food processing complexes.

Multiple-purpose use of nuclear energy increases its contribution to the future energy assessment of the CSSR. The shortage of other energy sources hastens the resolution of associated problems.

The combined generation of electricity and delivery of heat together with utilization of most of the waste heat can double the effectiveness of nuclear condensing power stations. Furthermore, every 1 percent of increased energy effectiveness from units with VVER 440 reactors represents an annual savings equivalent to 7,500 tons of heating oil.

Since the development of coal extraction and other domestic sources of energy is at its maximum level, the utilization of nuclear power in electroenergy and thermal plants will, between 1981 and 1990, save about 75 million tons of standard fuel, an amount which would have to be imported from abroad in the form of coal, petroleum or natural gas. According to prognostic calculations, the cost of importing these fuels in comparison with the costs of importing nuclear energy would be at least 2 1/2 times as high.

The economic return for replacing conventional fuels with nuclear fuel with its manifold higher concentration of energy potential is reflected in the national economy not only in electric power and thermal power but also in the fuel industry, transportation and industrial branches were production pays for the importation of fuels and energy from abroad. The efficiency of nuclear power development must therefore be considered from an intersectoral viewpoint and not only according to construction and operational costs of nuclear power stations.

Comparing the economics of foreign and Czechoslovak nuclear power stations and their fuel cycles with the economics of conventional thermal pwoer facilities and their fuel base confirms the economic efficiency of nuclear electric power.

Construction costs of nuclear power stations can be as much as 50 percent higher than for thermal power stations. The situation is the reverse in regard to fuel and production costs. Fuel costs are 50 to 70 percent lower than fuel costs for coal-fired power stations. After projecting these data on the differences of comprehensive investment and fuel costs, the resulting costs under our conditions of production for 1 unit of energy in nuclear power stations are at least 20 percent lower than in coal-fired facilities.

The economics of nuclear power will further improve with the recycling of nuclear fuel. At the present time, light-water reactors are operated in so-called open fuel cycles which means that burned out fuel, after a certain period of storage, is not reprocessed for further use. This method of operation is more demanding on the consumption of natural uranium by about 30 percent than it will be in the future, after the introduction of recycling of leftover enriched uranium and newly derived plutonium.

Consequently, orientation toward the use of nuclear power is advantageous also from the economic point of view. The changes connected with the shift to building a whole new addition to basic electricity generation by nuclear power generation which is more demanding in technology and investment will affect the manufacturing process and galvanize the structural rebuilding of the economy and especially the management of energy. So it is very important to make a systematic analysis of critical factors determining the optimal extent and efficiency of building nuclear sources of electric power and heat. Slowing down the development of nuclear power with respect to the program outlined would have an impact on the whole national economy. It is shown that even with implementation of very economical development alternatives of energy management it will still be to our advantage to build nuclear power according to the alternatives closest to the upper limit of its development prognosis. A slippage in construction of nuclear energy capacity of 1 year would lead as early as 1985 to increasing the need for imported fuel by 1 to 2 million tons of standard fuel annually, a great burden economically.

The development of nuclear power could effectively guarantee a sufficient increase in energy consumption in the CSSR even if supplies of fuel and energy available from hitherto conventional sources were to stagnate or gradually decline.

Our nuclear energy is developing as an integral part of the nuclear power of CEMA member states. Its development to the year 1990 is based on international agreements concluded with the USSR and other substantively involved CEMA member states. Not only is the cooperative production of equipment components for the light-water VVER 440 and VVER 1000 reactors based on these accords but also cooperation in the construction, mastery and operation of the power stations with these reactors. These agreements also guarantee to the CSSR the delivery of nuclear fuel from the USSR for all nuclear power stations built. Consequently, the construction of the nuclear power stations in the required time periods remains a critical problem.

The results of the construction and operation of nuclear power stations up to now confirm the feasibility of the long-range development programs for Czechoslovak nuclear energy.

8491
CSO: 5100/3019

NUCLEAR BUDGET, PLAN EXCLUDED FROM ECONOMIC RESTRICTIONS

Buenos Aires ENERGEIA in Spanish Apr 82 pp 547-548

[Article by Martin F. Yriart: "Nuclear Plan: Today's Seed, Tomorrow's Fruit"]

[Text] For the second year in a row, after protracted lobbying and negotiations, only the personal intervention of the incumbent Executive Power saved the CNEA [National Atomic Energy Commission] budget from the inexorable scissors and thus prevented imminent paralysis of the Nuclear Plan.

After making a careful analysis of expenditures which could be deferred, the CNEA presented at the beginning of the year a request for funds for 1982 on the order of 8 billion pesos. This figure greatly exceeded the ceiling stipulated in Treasury Department directives and it was to be anticipated that it would arouse in Minister [of Economy] Roberto Teodora Alemann an antagonistic reaction. Worthy as the reasons set forth by the CNEA were, the doctrinaire and inflexible position of the minister regarding elimination of a budget deficit was well known. In fact, during the whole month of February and part of March, the Treasury Department generated all sorts of stories about the budget cut which CNEA would have to accept.

In the arguments of the Argentine atomic organization, there was on the other hand nothing new. The Executive Power had established a Nuclear Plan with exact time limits for its phased execution. In carrying this out, the CNEA had made contractual commitments within and outside of the country amounting to thousands of millions of dollars. A budget reduction would put CNEA in the position of having to defer practically all large-scale works initiated or projected during the last 24 months.

Regarding Argentine energy supplies, these postponements would certainly mean an inevitable shortage before the end of the current decade.

A very immediate effect would have been the necessity of renegotiating contracts--especially with international suppliers--with an inevitable increase in the financial cost of projected works, and that would have come down heavily on the whole national economy.

Third and last, but no less important, would be the negative effect of that renegotiation on the credibility of the Argentine Nuclear Plan, both within and outside of the country.

At the beginning of March, the minister of economy made it known that the CNEA would have to reduce its budget for 1982 by 2.5 billion pesos. CNEA's answer was that the maximum possible reduction of the figure originally submitted was 1.2 billion pesos. A greater cut in its budget would lead to a paralysis of critical works such as the heavy water plant at Arroyito, renegotiations and already mentioned costs.

Having thus stated the situation, the final decision was in the hands of Lieutenant General Galtieri. It was not surprising that the result was favorable to CNEA's position. The Nuclear Plan is one of the few indisputable "assets" which the administration of the Armed Forces has had in its favor these 6 years.

The result is a budget approximately equal to the one of 1980 and 10 percent higher than the one of 1981. The amount finally agreed upon means, however, that there will be delays in certain projects and programs. These are not those from which an immediate repercussion will be felt, but the required financing of these will have to be restored in the near future or else the soundness and solvency of the present scientific and technological position in Argentine nuclear development could deteriorate within a not very long period of time.

The clearest case is that of the future design and construction of the power reactors for nuclear power plants.

With Atucha II, Argentina entered a transition phase which would allow her to put an end to her forced dependence on foreign suppliers for the design of her nuclear power plants and the supply of their critical components. Both Atucha I and Embalse, it will be remembered, were "turn-key" projects respectively awarded to Germany and Canada (the latter in collaboration with Italy).

In the case of Atucha II, the contract terms are completely different because they stipulate that the supplier of the technology and the chief components--the German firm Kraftwerk Union A. G., a subsidiary of Siemens, must form an engineering company in which CNEA will hold the greater share of capital stock. CNEA will thus play the role of "industrial architect" and will be the recipient of the German know-how, looking forward to the progressively decreasing stock investment of KWU in the company to the point where it disappears completely as it is progressively replaced by national private capital.

The transfer of technology thus achieved will not, however, entirely end the problem. The design of the KWU reactors imposes limitations upon their manufacture in this country because components like the pressure vessel, with dimensions and exceptional technical requirements still determined by international standards, will require uneconomical installations and development. A possible alternative is presented by the reactors of the Embalse type, with pressure pipes originated in Canada.

In a paper presented at the beginning of March in Tokyo, a study which has not yet had the dissemination it deserves in our country, engineer Jorge Cosentino (who recently in CNEA was put in charge of studies on the fourth power plant) states the following: "In accordance with the timetable of the Argentine

Nuclear Plan, it (the fourth nuclear power plant) should begin operating in 1991 and be, in principle, of the pressure pipe type." And he adds, "The CNEA decided about the middle of 1981 to begin developing the information required for making the decision which will have to be made about the middle of 1983 at the latest."

"Nevertheless," he says later on, "the difficulties involved in choosing the type of reactor to be used in the fourth power plant should not be underestimated. The decision that the next nuclear power plant be in principle of the pressure pipe type reflects the opinion, today still prevalent among many of those involved in the Argentine Nuclear Plan, that this concept is the most advantageous from various points of view such as adaptation to national conditions and construction costs."

"That decision," engineer Cosentino concludes, "will probably affect not only the fourth nuclear power plant but also subsequent power plants in the Nuclear Plan and consequently it requires careful analysis."

In summary, then it is a question of knowing whether Argentina will be able to acquire the know-how for the construction of a reactor with pipes; whether it will have to achieve some special development; and whether it can do it alone or will have to rely on foreign assistance (and, if the latter, how much and from whom).

To judge from past experience, the most probable outcome will be that, although Argentina will obtain Canadian approval for use of the CANDU design--about which there are some reservations--this country will still have to exert a considerable effort on its own, both with regard to engineering a nuclear steam supply system as well as to the preparation of local industry to provide those components which can be manufactured in this country.

This effort requires long-term investments, the contribution of valuable human resources from both the state and private sectors, and confidence in the visibility of the project on the part of those enterprises brought together to participate in it.

And all this will only be possible if the Nuclear Plan maintains the vigorous pace shown up to now and if it does not neglect, with fleeting arguments, the long-term investments in research, in the training of human resources, in development, and in the transfer of technology from the R&D [Research and Development] sector to the industrial and engineering sector.

9972
CSO: 5100/2161

BRIEFS

KUWAIT,TUNISIA DEAL --Kuwait and Tunisia are to cooperate in a $40 million project to produce uranium, the Kuwaiti newspaper AL-WATAN reported last week. Phosphoric acid produced from phosphates, which are abundant in Tunisia, will be used to separate the uranium from waste products. According to AL-WATAN, the deal will provide 120 tons of uranium for the Arab nuclear effort in 1984. An earlier report from Paris indicated that the plant will produce 132 tons of uranium a year when it is completed in 1985 (AN-NAHAR ARAB REPORT & MEMO, April 12). The French Company Uranium Pechiney Ugine Kuhlmann, is to provide technical assistance to the Tunisian chemical concern Société Tunisienne des Industries Chimiques Maghrébines for the project, which will be located at Gabes in southeastern Tunisia. The Tunisian and Kuwaiti governments are studying plans to establish an Arab nuclear research centre in Tunisia to be devoted to research into the use of nuclear energy for peaceful purposes. Earlier this year, Kuwait informed visiting Canadian Energy Minister Marc Lalonde of its interest in buying four Candu heavy water nuclear reactors (AN-NAHAR ARAB REPORT & MEMO, February 1). Two months ago Qatar hosted an Arab energy conference which called on Arab countries to develop their own sources of nuclear fuel with an eye to a future move into nuclear energy. [Text] [Paris AN-NAHAR ARAB REPORT & MEMO in English No 18, 3 May 82 p 10]

CSO: 5300/4715

NUCLEAR ENERGY SITUATION IN ARAB NATIONS REVIEWED

London AL-DUSTUR in Arabic No 231, 26 Apr 82 pp 36-37

[Article: "Extraction of Uranium From Arab Phosphate!: The Arab World Decides To Turn to the 'Nuclear Alternative'"]

[Text] The Arabs and nuclear power: The "nuclear alternative," which most of the industrial nations have turned to in their efforts to diversify their sources of energy and partially reduce their dependence on oil, has also begun to acquire increasing importance among the nations of the Third World, especially those which import their oil from other countries. Most of the industrial nations view the nuclear alternative as something which is inevitable for the future since most of the other traditional sources of energy will run out. But the Arab nations--or at least most of them--are making the nuclear alternative a high priority, even though they have abundant other sources of energy.

Ten out of 21 Arab nations are making efforts to acquire nuclear power. In eight of these countries the economic feasibility of this has been shown, and the other two nations are still in the stage of initial research. As in the case of [nuclear] power programs anywhere in the world, there are those who are in favor of, and those who are against, nuclear power programs in the Arab world.

Those opposed to the programs emphasize the danger which this alternative would constitute for the Arab countries, and say that the other sources of energy are sufficient and more than enough for local needs. Those who are in favor of nuclear power consider these programs to be an economic necessity for meeting some local energy requirements which, in the future, are expected to consume most of the petroleum produced.

In the Arab world, opposition to efforts to acquire nuclear power has not yet crystallized and is still confined to specialized academic circles. In the industrial nations of the West, however, such opposition has been transformed into mass movements which are opposed to all efforts to acquire nuclear power and which warn of the consequences of constructing more reactors which might threaten the future of mankind. These groups which are opposed to nuclear power are enjoying increasing popularity, and they are highly organized, especially in nations such as Britain, the United States and West Germany.

Some of these groups have been the victims of police brutality in other nations such as France and Holland. In this report we will review the "nuclear alternative" from the standpoint of its importance to the Arab nations and the potential of each individual [Arab] nation in terms of the technology of its nuclear reactors and the existence of uranium fuel in its territory. The report shows that most of the Arab nations which have begun nuclear programs are determined to economically utilize these programs in order to produce power. By the end of this century, the amount of electric power produced by nuclear reactors in the Arab world will total about 7,500 megawatts. Furthermore, the Arab world is self-sufficient in uranium fuel, which needs to be enriched before it is utilized in reactors. At the present time the technology of uranium enrichment is restricted to the Western industrial nations and the Soviet Union.

As far as nuclear reactor research and technology are concerned, there are eight Arab nations which are on the threshold of utilizing nuclear power, and some of these actually possess reactors which produce great amounts of power.

Iraq: The [Iraqi] Atomic Energy Committee which was founded in Baghdad in 1956 is one of the oldest atomic energy committees in the Arab world. Right now practical research is being conducted with experimental reactors in the Tuwaythah Institute and at the Baghdad Research Center. Also, nuclear cooperation agreements have been concluded between Iraq and the Soviet Union, France, and Italy. Iraq has a Soviet reactor which operates at a capacity of 2 megawatts. Work on the Osiris reactor (with a capacity of 600 megawatts) was scheduled to be finished in 1985, but the Zionist bombing of this reactor has delayed production plans somewhat. At the present time negotiations are being conducted concerning rapid construction of a power-generating reactor. According to International [Atomic] Energy Agency data, during the 1990's Iraq is scheduled to begin the construction of six reactors, the capacity of each of which will be 200 megawatts, and this means that by the end of the twentieth century Iraq's total nuclear power capacity will be 2,000 megawatts.

Kuwait: Kuwait will not be producing electricity by means of nuclear power before the beginning of the 1990's. Plans include the construction of a nuclear power station with a capacity of 600 megawatts during the second half of the 1980's. This will be followed by the construction of two reactors, the capacity of each of which will be 1,200 megawatts. In the field of nuclear power Kuwait is working together with Britain since a joint cooperation agreement in this field between the two countries has been signed. Kuwait's total capacity in nuclear power will be 1,800 megawatts by the year 2000.

Algeria: In 1976 a republican decree was issued which dealt with the establishment of a nuclear strategy, based on self-reliance, which would provide for development of a permanent source of energy. Immediately an ambitious program for the development of nuclear technology began, and half of the budget for science and technology was allocated to the activities of [Algeria's] nuclear science center. The Algerian Government expects to build its reactors in the near future. According to International Atomic Energy Agency data, by the year 1990 Algeria will possess three nuclear units, the capacity of each of which will be 150 megawatts, and their capacity will double by the end of the twentieth century.

Egypt: There are plans to construct, between 1987 and 1990, four nuclear power stations which will produce a total of 1,800 megawatts of power. Right now steps are being taken to construct the first of these power stations in Sidi Kurayr, on the northwestern coastline near Alexandria, and it will have a capacity of 600 megawatts. Other areas between the Western Desert and the Red Sea coast are currently under study. It is anticipated that the generation of nuclear power will account for 13 percent of the electric power produced in Egypt in 1990, and this figure is expected to go up to 22 percent by the year 2000.

Libya: [Libya's] Atomic Energy Committee was founded in 1975. Recently laboratory research began in Al-Fatih University, in cooperation with the Soviet Union. International reports tell us that the Soviets intend to build a reactor having a capacity of 440 megawatts, and negotiations are going on with the French to build another power station having a capacity of 600 megawatts. The Libyan Ministry of Electricity anticipates that a plant having a capacity of 400 megawatts will begin providing services by the year 1990.

Saudi Arabia: The Saudis currently do not intend to make practical commercial use of nuclear power. But in Saudi universities there is a noticeable degree of interest in research and development activities [dealing with nuclear power]. An agreement has been concluded with France to set up an experimental reactor having a capacity of 6 megawatts in the University of Dhahran. The Saudi Ministry of Petroleum is planning to establish a research center which will be in charge of matters concerning nuclear energy. The International Atomic Energy Agency anticipates that a unit having a capacity of 150 megawatts will be operating in Saudi Arabia during the 1990's, and that its capacity will double by the end of the present century.

Morocco: Negotiations are currently being conducted with France concerning the construction of a reactor having a capacity of 200 megawatts. This program would be implemented in 1985. Also, theoretical research is being conducted in Rabat University. The International Atomic Energy Agency anticipates that Morocco's [total] nuclear power capacity will be 400 megawatts by 1990, and will total 600 megawatts by the year 2000.

Tunisia: Nuclear power research is being conducted in Tunisia at the Institute of Scientific and Technical Research. There are plans to produce electricity by means of nuclear power by the end of the 1980's, using a reactor having a capacity of 250 megawatts. The capacity of this reactor will triple by the end of the present century.

Nuclear Fuel

Concerning the matter of exploration for nuclear fuel and available uranium and thorium, most of the Arab nations consider mining for radioactive materials to be a national priority since any nation having nuclear aspirations needs to provide for its nuclear fuel requirements. The importance of reserves of nuclear fuel in the Arab world is increasing in view of the predictions concerning the scarcity of nuclear fuel in the world and in view of the controls and embargo which international commerce in uranium is subject to.

Exploration [for nuclear fuel] is going on in most of the Arab countries. It began in 1970 in Algeria. Algeria has estimated reserves of approximately 58,000 tons of uranium, and this is sufficient for the needs of several Arab [nuclear power] programs. There have also been important finds in Egypt, especially in the Eastern Desert near Jabal Jalal. Right now a plant is being constructed which will produce 100 tons of uranium per year. Production in the plant will begin by the end of this year.

In this regard there have also been encouraging developments in some parts of Iraq, in Jordan's Wadi al-Zarga', and in the south of Libya. Furthermore, Morocco has had notable success in the field of mining uranium and its uranium reserves are estimated at about 1.4 million tons. Also, there are an estimated 10,000 tons of uranium reserves in Somalia. In addition to this, in Saudi Arabia, Sudan, Mauritania, and the UAE there are encouraging indications [concerning the finding of nuclear fuel] which merit additional study.

Phosphate

It should be mentioned that the United States invented the chemical process of producing uranium from phosphate (and that the United States currently has a monopoly on the utilization of this process). This chemical process is considered to be one of the most important scientific discoveries which concern the Arab world since the Arab world has a total of 50 billion tons of phosphate reserves, that is, more than 40 percent of the world's reserves. Theoretically the Arab world could extract 6 million tons of uranium oxide by utilizing the American process. This process first transforms the phosphate into phosphoric acid, and then the uranium is extracted as a by-product during the production of phosphate fertilizers.

It is expected that the first Arab plant for the extraction of uranium from phosphate will be built in Morocco, the country which has three-fourths of the Arab world's [phosphate] reserves and produces two-thirds of its phosphate. Efforts to achieve this objective are being made jointly with the U.S. corporation Westinghouse.

It might be that the "nuclear alternative" is not an urgent necessity for the Arab world at the present time due to the availability of other sources of energy and the ease with which they can be extracted. However, most of the Arab nations are putting it in a prominent place in their list of priorities. They have the potential and resources which can make this alternative a real possibility. This is an encouraging fact in view of the objections, obstacles, and pressures being exerted by the industrial nations in order to maintain their monopoly in this field. Current evidence convincingly indicates that the Arab world has decided to utilize nuclear power in its efforts to achieve development in the future.

9468
CSO: 5100/4718

BRIEFS

NUCLEAR ENERGY TURNED DOWN--Nairobi has turned down an offer from the German company KWU to supply it with a 300 MW power plant. Although it is one of Africa's most advanced countries in the nuclear field, Kenya has finally decided not to get into nuclear-based production of electricity before the turn of the century. Reasons cited include: a shortage of technicians and an inadequate network. If a 100MW model were to show up this decision could change, but, even if such a model does come about, its profitability will be marginal. [Text] [Paris DEFENSE ET DIPLOMATIE in French 10 May 82 p 8]

CSO: 5100/5666

CLUE MANAGER DENIES OPERATIONS ABOUT TO BE SHUT DOWN

Monrovia DAILY OBSERVER in English 13 May 82 pp 1, 10, 12

[Excerpt]

There is growing speculation that the Coastal Liberia Uranium Enterprises Inc. (CLUE), a private American company exploring for commercial uranium in Liberia, is about to close down its operations here in apparent preparent to leave the country.

But CLUE's Operations manager Mr Leslie Kaye, has vehemently denied this speculation.

When contacted by this newspaper for his reaction, he said that for economic reasons, it would be "premature and unbusinesslike" to terminate a legal contractual agreement entered into by and between the Govern-

The Acting Minister of Lands, Mines and Energy, Mr William A. Freeman, also told our reporter that he had no knowledge of CLUE's intention to close down and leave the country.

However, the Daily Observer has reliably learnt that the company has recently declared some 75 of its local employees "redundant" including it's office manager, Mr Max B. King, administrators, Liberian geologists, drivers and cooks.

We have also learnt that CLUE has been selling a great deal of its equipment including vehicles from its warehouses on ELWA Road in Paynesville.

Of the company's 17 expatriates only three are said to be in active service and the rest are believed to have returned home or about to leave.

Acting Minister Freeman told the Daily Observer yesterday that as far as he knew CLUE had an initial nine-year contractual agreement in three phases for three years each to explore uranium deposits in Liberia.

Owing to the fact that the company had already spent $11M on the program, Mr Freeman reasoned that it would be unlikely, or for that matter, not in the best interest of the two parties, for CLUE to terminate its activities abruptly.

Asked what could Government do in such a case, he indicated that terms of the agreement remain intact and alive as ever, and Government can pursue its rights as provided under the Government. He maintained that the Liberian Government remains firmly committed to the said agreement and nothing to the contrary was being conceived.

But Mr Kaye explained that the exploration activities of CLUE are carried out on a seasonal basis for both dry and rainy seasons. During the dry period, which runs from October to April, of each operational year, the company is very active in exploring uranium and associated minerals as approved under the contract. But this is not so in the rainy period (May to September), at which time he said, operations are reduced due to unfavorable geochemical factors for exploration and environmental reasons.

It is during the reduced operations season, Mr Kaye said, that many of the field workers, except for those at the Monrovia central office, are disengaged and their activities terminated temporarily. "Many of our workers are re-employed afterwards," he added.

CLU Enterprises has been operating in Liberia since November 1977, when the agreement incorporating the company and underlining its objectives was formally signed by the Government of Liberia and the Management of CLUE and its parent body, Western Enterprises, Inc., a Delaware based-American corporation.

Low profile

According to the Ministry of Lands, Mines & Energy, the primary objective of CLUE's exploration program has been to discover uranium deposit in Liberia of commercial or marketable quality and quantity.

Mr Kaye, a 54 year old Canadian, said CLUE has been doing just that, covering an exploration area of some 20,000 square miles from the start in 1977 in Bong, Namba, Grand Bassa and Montserrado Counties and parts of Grand Cape Mount and Grand Gedeh Counties. Although uranium deposits have been found in the exploration areas prescribed the Manager stressed that no uranium of economic value has yet been discovered.

The company has already spent more than $11 million on explorations alone, he indicated, yet nothing of commercial value has been found.

As a result and because of this, Mr. Kaye emphasized that the company would prefer at this point to operate on a "low profile", reducing the level of its activities.

Also he said CLU Enterprises has approached Government for expansion rights that would allow the company to explore for and develop other minerals in addition to uranium that may be encountered during the course of uranium exploration within the concession areas. Some of the minerals envisaged include nickel, chromite and gold.

The Ministry of Lands, Mines and Energy confirmed this and indicated that negotiation with the company on the matter are due to get underway shortly.

All this, Manager Leslie Kaye agreed, is being done to make the company flexible and viable in its future operations, taking into account the odds encountered so far in the exploration of uranium.

Beyond this, the Manager said the continuation of the company's operations here will also depend on world market conditions for uranium (the price of uranium has dropped on the world market), additional funding by the parent company of exploration activities and the level of activities of the company here.

"At the moment CLUE has no firm target for uranium, but the attractions are good," Mr. Kaye informed the Daily Observer Wednesday.

"There is competition in other parts of Africa, Namibia, and the world, specifically Australia as regards the exports and mining of good quality uranium, a development which Mr. Kaye said has contributed to the low price of the mineral on the market.

CSO: 5100/5659

NIGERIA

BRIEFS

PAPER ACCUSES WEST--The NIGERIAN STATESMAN in its editorial condemns the frequent supply of nuclear weapons to the racists in South Africa by Western nations. In the view of the paper, nuclear plants pose a very dangerous threat to the African people in particular and the Third World in general. The STATESMAN regrets that the United States, which feeds the venomous apartheid enclave in South Africa with nuclear weapons, has as a consequence disregarded the feelings of other African nations. However, the paper does not sanction the U.S. recent moves to use Africa as an arms depot and urges the OAU to vehemently oppose this diabolical proposal. [Excerpt] [AB251335 Lagos International Service in English 1130 GMT 25 May 82]

CSO: 5100/5662

BILL REGULATING NUCLEAR SAFETY, ENERGY PUBLISHED

Johannesburg THE CITIZEN in English 27 May 82 p 4

[Text]

A BILL providing for the establishment of the Atomic Energy Corporation of SA Ltd, a Council for Nuclear Safety and for licensing of nuclear activities was published yesterday.

The Nuclear Energy Bill, introduced by the Minister of Mineral and Energy Affairs, Mr F W de Klerk, has been read a first time.

It provides, among other things, for the regulation of licensing of certain nuclear activities and security connected therewith and liability in respect of nuclear damage.

Provision is also made for the control of source material and radio-active nuclides and certain patents for inventions relating to nuclear or atomic energy.

In terms of the provisions of the Bill, the sole right to produce nuclear or atomic energy is to be vested in the corporation on behalf of the State.

It also prohibits the production of nuclear or atomic energy, except under licence.

The Bill provides further that no vessel which is propelled by nuclear or atomic energy, or has on board any nuclear installation or nuclear-hazard material, shall enter the territorial waters of the Republic for the purpose of calling at any port within the Republic, or anchor or sojourn in the country's waters, except under the authority of a nuclear licence granted by the corporation.

CSO: 5100/5663

KOEBERG NO THREAT, SAYS DE KLERK

Johannesburg THE CITIZEN in English 22 May 82 p 11

[Text]

RADIOACTIVE waste from the Koeberg nuclear power station would be stored on site until the Atomic Energy Board's site for the ultimate disposal of waste was ready, the Minister of Mineral and Energy Affairs, Mr F W de Klerk, said yesterday.

Replying to a question by Mr John Malcomess (PFP, Port Elizabeth Central), Mr De Klerk said the low and intermediary activity waste products were spent resins from the water treatment plant — which would be mixed with concrete and encapsulated in thick-walled concrete drums — paper, and other contaminated material which would be sealed in steel drums.

"The strictest radiation control measures are applied to the storage of these wastes and there is no possibility of hazard on or off site with this type of activity," Mr De Klerk said.

These wastes would be stored at Koeberg "for a few years".

Liquids containing extremely low residual radioactivity within limits set and enforced by the Atomic Energy Board, in accordance with international standards, would be discharged from the plant into the Atlantic Ocean.

Marine life and sediments would be monitored regularly to ensure that there was no buildup of radioactivity in the surrounding area.

"These liquids are not considered to be radioactive waste in the true sense of the word."

The only radioactive material which would be discharged into the atmosphere would be inert gases which were not contaminating and would not concentrate in the environment.

"Discharges will be made periodically at rates within limits set and enforced by the Atomic Energy Board, again in accordance with international standards.

"These discharges will not significantly raise the background radiation level at the boundary of the Koeberg site but, as a further precautionary measure, flora and fauna will be monitored regularly for changes in radiation levels.

"These discharges will pose no threat to public health and safety," Mr De Klerk said.

CSO: 5100/5663

BRIEFS

RADIATION ALARM SYSTEM--Cape Town--Cape Town has become one of the few cities in the world with its own radiation monitoring system. The system which has been installed at six points in the municipal area will keep a constant check on radioactive emissions from the Koeberg nuclear power station. The early warning system can detect minute changes of atmospheric radioactivity and as soon as it reaches a certain level, yet to be determined, will activate an alarm in the civil defence headquarters in the Civic Centre. [Text] [Johannesburg THE CITIZEN in English 21 May 82 p 3]

CSO: 5100/5658

FEDERAL REPUBLIC OF GERMANY

HAMBURG TO BUILD NUCLEAR, COAL-FIRED POWER PLANTS

Hamburg DER SPIEGEL in German 3 May 82 pp 115-117

[Article: "Threatening Embrace"]

[Text] Hamburg's new course in nuclear power: both-and. Dohnanyi and the SPD intend to build Brokdorf and at the same time make nuclear power unnecessary.

On 14 occasions important people from politics and business had held negotiations about Hamburg's future energy concept. Then, on Tuesday of last week, Mayor Klaus von Dohnanyi (SPD) and Hans Werner Oberlack, board chairman of the Hamburg Electricity Works (HEW), announced a twofold decision:
--Hamburg and the HEW will continue joint construction of the Brokdorf nuclear power plant on the lower Elbe River in order, according to the planning, to be able to draw nuclear power from the 1,300 megawatt reactor starting in 1987.
--Hamburg and the HEW, however, will aslo build several coal-fired power plants in the Hanseatic city (which are supposed to heat 330,000 dwellings on the principle of the cogenerator) in order to make nuclear power unnecessary and to make it possible to extricate themselves from Brokdorf.

The mayor celebrated the "spectacular result of negotiations" with the HEW as a "classical reform decision" which "no one at all thought possible"--no doubt because hardly anyone really had wanted to have it that way.

The HEW did not want the coal-fired power plants because for years the company has been rigorously pressing forward with the expansion of nuclear energy and with Brokdorf would be able to meet up to over 70 percent of Hamburg's daily power needs from nuclear reactors. Share of nuclear power in the country as a whole: 14 percent.

The majority of the Hamburg SPD, and with it most of the Social Democrats of the North German Laender, did not want Brokdorf because they reject the enormous dependence on the nuclear fuel uranium and in its place advocate energy savings and the use of coal.

Thanks to Dohnanyi, Hamburg will soon have both--power from the Stade, Brunsbuettel, Kruemmel (from 1983 on) and Brokdorf nuclear power plants and energy from new coal-fired power plants. The key factor in the twofold decision: For generating electricity an excess capacity is being created which can then be dispensed with by getting out of Brokdorf.

The mayor's "very clear solution" has confused his own camp and that of the opposition. The decision whether to start now to get out of Brokdorf or to stick to the project has once again been postponed. And after the announcement of the decision it was by no means clear whether this has now become the "start of getting out" as Hamburg SPD chairman Joerg Koenig interpreted it, or "a getting out of the getting out" as DIE WELT commented. The leading Hamburg Social Democrats and the managers of the power conglomerate hope to have achieved at least one thing with the compromise: an easing of the emotion-laden political conflict which for years has been dividing advocates and opponents of nuclear power and which for the SPD turned into an explosive charge.

Yet the "third way out" (SUEDDEUTSCHE ZEITUNG), which was chosen with tactical skill, might also cause the opposite. Headlines in Springer's HAMBURGER ABENDBLATT: "Brokdorf--SPD At Odds Again."

Because Brokdorf, like no other nuclear power plant installation, has been the focal point of innumerable demonstrations and violent confrontations since the start of construction in 1976; the large construction project was the target of legal quarrels and political disputes, as well. Advocates and opponents elevated the nuclear plant in the Wilst Marsch to a symbol for and against utilizing nuclear energy.

The quarrel progressed on opposite fronts; North German Social and Free Democrats opposed the nuclear power advocates in the Kiel CDU Land government-and in the Bonn Social-Liberal coalition, led by Chancellor Helmut Schmidt and Minister for Ecomonics Otto "Count Brokdorf." Individual trade unions voted for and against the reactor, and almost any means of providing Brokdorf a brilliant future seemed justified to the nuclear lobby from business and industry.

The policy chalked up a list of prominent victims in the nuclear conflict: Schleswig-Holsteins' SPD opposition leader Klaus Matthiesen renounced the leading candidacy for the Landtag campaign in 1983 in Schleswig-Holstein because Chancellor Schmidt openly supported the pro-Brokdorf course of the Kiel CDU government. Dohnanyi's predecessor, Hans-Ulrich Klose, stepped down as mayor 11 months ago because the Hamburg Land SPD board and the SPD City Parliament fraction, contrary to resolutions by party meetings and the Senat, denied him support.

The HEW, the union of power companies and the nuclear power industry assumed a special role in the move. The monopoly enterprise strictly refused to change the policy (get out of Brokdorf) which had been decided by its majority stockholder.*

---

*Hamburg holds 72 percent of the HEW stock. The rest, including 6,000 HEW employee shares, is distributed among 30,000 private stockholders.

Executive board and board of trustees, on which right-wing comrades keep company with representatives of the CDU, the energy industry and the HEW staff for Brokdorf, determine the manner and scope of Hamburg's energy policy. And this nuclear tangle over Hamburg has thus far resulted in the fact that the HEW, in spite of or because of its high share of nuclear energy, has the second highest electricity prices among the 50 most important West German electricity works.

Thus, it signifies a course correction that Dohnanyi, by means of an adroit way of negotiating, committed the HEW in a "threatening embrace" to build new coal-fired power plants and to press forward with the expansion of overland heating (from 195,000 to 330,000 housing units). In any event, the HEW's existing coal-fired power plants are in need of renovation sooner or later and belch tons of dust and sulfur gases into the atmosphere from their smokestacks.

With the planned cogenerator the new power plants will simultaneously meet several goals relating to energy, environment and labor market policy: the fuel used will be utilized to a far higher degree than in the case of straight power production. Exhaust heat will no longer heat up the atmosphere or the Elbe, but swellings. Hamburg's air will at least become a bit cleaner because modern filters will decrease emissions and thousands of individual furnaces will become unnecessary; in addition, power plant and overland heating construction promises roughly 1,500 jobs in the next few years.

To be sure, whether the energy concept will be implementable in the way that was decided is doubted even by Social Democrat city hall politicians: "That's a likely story."

The involvement in Brokdorf will probably cost the HEW DM2.5 billion, the coal-fired overland heating program at least DM3 billion, and the opposition to the new coal-fired power plants is growing in the parts of the city affected.

A high level Hamburg comrade resigned himself in the following way: "How, after the Brokdorf decision, are we now going to explain to our citizens that they will have to live with a coal-fired power plant outside their front door." And the decision is certainly of no help for parts of the SPD base which just weeks before the Hamburg City Parliament election on 6 June are supposed to explain Dohnanyi's Brokdorf concept to the citizens.

In the election platform recently published by the SPD, the turning away from Brokdorf is justified without any "ifs" or "buts," now the line is rather running in the way put forth by SPD chairman Willy Brandt as an energy guideline: a "decisive both-and."

12124
CSO: 5100/2157

'MILLIYET' COLUMNIST DISCUSSES 'MUSLIM' ATOMIC BOMB

Istanbul MILLIYET in Turkish 3 Apr 82 p 3

[Article by Attila Ilhan in the column "Directly": "Muslim Atomic Bomb"]

[Text] Zulfikar Ali Bhutto got in trouble over this as early as 1976. On 30 October of that year, he said:

"While the Israeli, South African and Indian unlimited nuclear programs are not considered an 'incident,' a big deal is being made of our program, and this is an alarming commentary on the views which do not outwardly deny the thing called 'worth'.... Is it possible to claim that discrimination is not being practiced? Does it prove that the nuclear monopoly of the Western powers is being used on behalf of peace and balance? There are many other non-nuclear states besides Pakistan which would be happy if they felt secure in this regard."

Bhutto reached agreement with France for an atomic powerplant and with Germany for an atomic reactor and heavy water facility; he was accused by the "system" of wanting to have the bomb. Although he was supported by the large majority of the Pakistani people, he not only fell from power, but was hanged.

That's one.

"Osirak" Adventure

Saddam Husayn, in a statement to the Lebanese magazine AL-USUL AL-'ARABI as early as September 1975, announced that he wanted Iraq to be the first Arab nation to have atomic weapons "against the Zionist threat."

Iraq reached agreement with France. It would buy a nuclear reactor called "Osirak"! Osirak fuel is the 93-percent enriched uranium from which the atomic bomb can easily be manufactured. Not content with this, moreover, Iraq wanted four lots of fuel at once, of 65 kilograms of enriched uranium. According to the experts, this would easily allow it to build an atomic bomb in 4-5 years. The Osirak agreement was concluded in 1976 for delivery on 9 April 1979.

Four days before delivery, the two reactors, ready for shipment to Iraq and under close guard in the nuclear hangar, were blown up "by unknonw persons." France got the reactors repaired and delivered them to the Iraqis. In June

1980, the Iraqi physicist Yahya al-Mashad, who had gone to Paris to take delivery of the first batch of uranium 235, was killed "by unknown persons." The Shiite rebellion against the Iraqi regime had begun in 1979. Shortly after the Osirak was installed, on 7 June 1981, as we all remember, it was destroyed by bombs dropped from Israeli aircraft.

That's two.

"System's" Nightmare

What bothers the Islamic nations is this:

"Israel and South Africa have a nuclear capability. That's the Christians, the Jews and the Hindus. Likewise the communist nations. Only the Muslim world lacks nuclear capability."

Qadhdhafi is said to have first conceived the Islamic atomic bomb. Muhammad Haykal, the newspaperman who was an intimate of Nasir's, revealed in his memoirs that he put forward in talks with the "Chief" the need for the bomb to finish the Israeli business. It was also he who later gave Bhutto and Pakistan moral and material support. The Iraqi plan, however, was aided by Saudi Arabia, and probably still is: It was Saudi Arabia that ordered from France the duplicate of the reactor destroyed by Israel. The powerplant would be built in Iraq and Saudi Arabia would pay for it. France could not renege on the order because it gets 73 percent of its oil from these two countries. Yet it was heavily pressured by the "system." They do not want a Muslim nation in the gulf region to acquire nuclear arms.

Two New York TIMES reporters, Steve Weissman and Herbert Krosney, left their jobs and spent 18 months on a world tour, compiling a report on the "Muslim bomb." The book was published in America. The gist of it was to accuse France of arming the Muslims with the bomb against the West, as this is the conclusion they reached: At least one Muslim nation may now be considered to have a nuclear capability. But which one? Pakistan? Iraq? Iran? Saudi Arabia? Libya? Syria?

In February 1979 (I was writing in the newspaper DUNYA then), I published two articles. Would you like to hear the name of one of them? Here it is: "System's Nightmare: Muslim Atomic Bomb." [I said] The West is gambling on Israel and Greece in the Middle East (Egypt later joined). It will not do for anyone other than close friends to have nuclear power. Should it become necessary to intervene in the region, the possibility of the Muslim nations' defending themselves with nuclear weapons scares them. Yet, as known, the gulf nations proposed and adopted the principle that the regional nations resolve the problem among themselves. In this case, they have to have a "deterrent" against the "sirens' songs from outside."

To have a "deterrent" is possible only by having "deterrent" weapons.

Do You Wonder

Are you wondering what the title was of that other article I wrote in February 1979? Very well, let me tell you: "We Must Produce Our Own National Atomic Bomb." Really!

8349
CSO: 5100/5302

END

END OF
FICHE
DATE FILMED

June 17, 1982